

DATA TRANSMISSION AND RECEPTION WITHIN A SPREAD-SPECTRUM  
COMMUNICATION SYSTEM

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Abstract of the Disclosure

A long code scrambler has been provided to scramble the data bits prior to QAM mapping. Different data rates are accommodated by using different long code m-tuples sampled at the modulation symbol rate, where m equals 2, 4 or 6 for 4, 16 or 64 QAM, respectively. In order to support 1XEV-DV users employing multiple Walsh code channels, a long code 6-tuple sample is permuted, to further randomize the QAM symbols. As appropriate for the modulation order, 2, 4 or 6 bits of the permuted 6-tuple are applied to the data sequence. That is, in addition to randomizing the modulation symbols for a given code channel, each code channel will likely have unique QAM symbols at any given symbol time.